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| APPLICATION NO. | FILING DATE | INVENTOR | CLASS | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------|-------|---------------------|
| 087788,560 | 01/24/97 | YAMAZAKI | S | 074614-36 |

19M1/0814

SIXBEY FRIEDMAN LEEDOM & FERGUSON
2010 CORPORATE RIDGE
SUITE 600
MCLEAN VA 22102

FAHMY, W. EXAMINER

ART UNIT

PAPER NUMBER

08/14/98

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/788,660

Applicant(s)
Yamazaki et al

Examiner
Wael Fahmy

Group Art Unit
1931



☒ Responsive to communication(s) filed on Jun 9, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 34-77 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 34-77 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

EXAMINER: Wael M.Fahmy

Claims 34-77 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 34-38 and claims 39-43 are identical claims and it is not clear how claims 39-43 give a different scope for the claimed invention. The same applies to claims 44-48 and claims 49-53. The same applies to claims 54-59 and claims 60-65 and claims 66-71 and claims 72-77. Also the independent claims do not recite the proper form for a markush group i.e., comprising at least one element selected from the group consisting ofAlso in the independent claims that recite the phrase "...said thin film added at...." is vague and unclear.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

Claims 34-77 are rejected under 35 U.S.C. 102(e) as being anticipated by Takeda et al.

Takeda et al shows in fig.(2) a semiconductor device comprising: a substrate (10) having an insulating surface; a gate electrode (20) on the insulating surface; a gate insulating film (30) over the gate electrode and the insulating surface; a non-single crystalline semiconductor layer (40) on the gate insulating film, said semiconductor layer including a channel region located over the gate electrode; and source and drain regions with the channel region interposed therebetween, wherein the semiconductor device further a thin film (31) between the channel region and the gate insulating film, the thin film comprising at least one element selected from the group consisting of carbon, nitrogen and oxygen. As to claims 35,40,45,50,56,62,68,74 the reference teaches that the gate insulating film can be SiO or Ta₂O₅ (see col.1, lines 24-25). As to claims 36,37,41,42,46,47,51,52,57,58,63,64,69,70,75,76 the reference teaches that the non-single crystalline layer can amorphous silicon (see col.2, line 43). As to claims 38,43,48,53,59,65,71,77 the reference teaches that the thin film (31) can have a thickness of 1000 Å. As to claims 55,61,67,73 the reference shows the thin film (31) located between the gate insulating film (30) and the semiconductor film (40).

The following table shows the field of search for the claimed invention.

| Field of Search | Date |
|--|---------|
| U.S. Class and subclass: 257/57,66,67,68,69,70,72 | 8/12/98 |

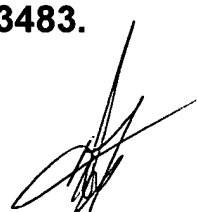
| | |
|---------------------------------------|---------|
| Other Documentation: none | |
| Electronic data base(s): APS and IS&R | 8/12/98 |



Any inquiry concerning this communication or earlier communications from the adjudicator should be directed to Wael M. Fahmy whose telephone number is (703) 306-3488 or (703) 308-4918. The Adjudicator can normally be reached on Monday- Thursday 7:00 AM-4:30 PM. The Adjudicator can also be reached on alternate Fridays.

If attempts to reach the adjudicator by telephone are unsuccessful, the adjudicator's supervisor, Ms. Angela Sykes, can be reached at (703) 306-3484, and Patent Analyst, Chris Mercer, can be reached at (703) 306-3471. The fax phone number for the group is (703) 308-4363.

Any inquiry of a general nature or relating to the status of this application should be directed to the Patent Assistant, Barry Nicholson whose telephone number is (703) 306-3483.


Wael M. Fahmy
Adjudicator
Art Unit 1931

Barry Nicholson/ Patent Assistant
Chris Mercer/ Patent Analyst

WMF